

Bisphenol A

1. MATERIAL AND COMPANY IDENTIFICATION

- MATERIAL IDENTITY : Bisphenol A
- COMPANY ADDRESS : #762, Jung heung-Dong, Yeosu-Si,
Jeonnam, 555-805, KOREA
- ISSUED : June 30, 2004 By Environment & Safety Team
- REVISED : December 27, 2005 (Rev. 1)

2. COMPOSITION/INFORMATION ON INGREDIENTS

- COMPONENTS
Bisphenol-A
- CAS Number ■ CONCENTRATION
80-05-7 99.85% Min.weight

3. HAZARDS IDENTIFICATION

- EMERGENCY OVERVIEW
Appearance & Oder : White Prills
Health Hazards : Causes severe eye irritation. Causes skin irritation. May cause respiratory tract irritation. May be harmful if swallowed. May cause allergic skin reaction.
- Health Effects
Inhalation : Breathing of dust from this material may cause a burning sensation in the nose, throat and lungs.
Eye Contact : Irritating to the eyes causing pain, redness, swelling and blurred vision. Material is dusty and may scratch the surface of the eye.
Skin Contact : Irritating to the skin causing a burning sensation, redness and/or swelling. Repeated skin contact may result in an allergic skin reaction causing itching, burning, redness and swelling.
Ingestion : May be moderately toxic and harmful if swallowed.

4. FIRST AID MEASURES

- Inhalation :
Move victim to fresh air. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, give 100% oxygen with rescue breathing or CPR as required and transport to the nearest medical facility.

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■ Eye :

Flush eyes with large amounts of water for at least 15 minutes, by the clock, while holding eyelids open. Flush eyes with water while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persist, consult a physician. Transport to nearest medical facility for additional treatment.

■ Skin :

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. Flush with large amounts of water for at least 15 minutes, by the clock, and follow by washing with soap if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment.

■ Ingestion :

DO NOT induce vomiting. Have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. DO NOT GIVE LIQUIDS TO A DROWSY, CONVULSING OR UNCONSCIOUS PERSON. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Transport to nearest medical facility for additional treatment.

5. FIRE FIGHTING MEASURES

■ Flash Point : 404.6°F/207°C

■ Extinguishing Media :

Use water fog, 'alcohol foam', dry chemical or carbon dioxide (CO₂) to extinguish flames.

■ Fire Fighting Instructions :

Material will not burn unless preheated. Clear fire area of all non-emergency personnel. Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure, NIOSH approved, self-contained breathing apparatus. Cool surrounding equipment, fire exposed containers and structures with water. Container areas exposed to direct flame contact should be cooled with large quantities of water (500 gallons water per minute flame impingement exposure) to prevent weakening of container structure.

■ Unusual Fire Hazards :

Explosive dust clouds may be produced. The minimum explosive concentration of BPA fines is 0.06 oz./ft³. This concentration can be exceeded in handling the product, particularly in bulk handling, conveying, and transport equipment grounding and inert atmospheres such as nitrogen blanketing are essential to assure safe operations.

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6. ACCIDENTAL RELEASE MEASURES

May burn although not readily ignitable.

■ **Protective Measures :**

Bond and ground handling equipment and transfer containers to prevent sparking.
Wear appropriate personal protective equipment (refer to Section 8) when responding to spills.

■ **Spill Management :**

Use cautious judgment when cleaning up large spills. Shovel and sweep up or use industrial vacuum cleaner. Avoid generating dust clouds. Place in container for proper disposal.

■ **Disposal :**

Proper disposal should be evaluated based on regulatory status of this material (refer to Section 13), potential contamination from subsequent use and spillage, and regulations governing disposal in the local area.

■ **Reporting :**

Notify authorities if any exposures to the general public or environment occurs or is likely to occur.

7. HANDLING AND STORAGE

Do not taste or swallow. Do not breathe material. Keep container closed. Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated contact with eyes, skin and clothing. Wash thoroughly after handling.

■ **Handling :**

Static electricity may accumulate and create a fire hazard.
Contaminated leather articles including shoes cannot be decontaminated and should be destroyed to prevent reuse. Store in a cool, dry place with adequate ventilation. Keep away from open flames and high temperatures.

■ **Storage :**

Keep containers closed when not in use.
Containers, even those that have been emptied, can contain hazardous residues.

■ **Container Warnings :**

Containers, even those that have been emptied, can contain explosive vapors.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

■ **Exposure Controls**

The level of protection and types of controls necessary will vary depending upon potential exposure conditions.

Appropriate measures include : Adequate explosion-proof ventilation to control airborne concentrations. Eye washes and showers for emergency use.

■ **Personal Protective Equipment**

Personal protective equipment (PPE) selections vary based on potential exposure conditions such as handling practices, concentration and ventilation. Information on the selection of eye, skin and respiratory protection for use with this material is provided below.

■ **Eye Protection : chemical goggles**

■ **Skin Protection :**

Use protective clothing which is chemical resistant to this material. Selection of protective clothing depends on potential exposure conditions and may include gloves, boots, suits and other items. The selection(s) should take into account such factors as job task.

■ **Respiratory Protection :**

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, an approved respirator must be worn.

Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard, 29 CFR 1910.134.

Types of respirator(s) to be considered in the selection process include :
Air-Purifying Respirator for Dusts and Mists, Supplied-Air Respirator

9. PHYSICAL AND CHEMICAL PROPERTIES

■ **Appearance & Oder : White Prills**

■ **Flash Point : 207 °C**
(Cleveland Open Cup)

■ **Chemical Formula : C₁₅H₁₆O₂**

■ **Boiling Point : 428°F**

■ **Solubility (in Water) : Slight**

■ **Melting Point : 314.6°F**

■ **Stability : Stable**

■ **Specific Gravity : 1.195 @ 25°C**

■ **Vapor Pressure : 0.2 mmHg @ 170°C**

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10. STABILITY AND REACTIVITY

- **Stability :**
Material is stable under normal conditions.
- **Conditions to Avoid :**
Avoid contact with strong oxidizing agents. Avoid high temperatures.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

- **Material Tested**
Bisphenol-A

- **Effects**

Dermal – LD50
Inhalation – LC50
Oral – LD50

- **Test Results**

2 g/kg (Rabbit)
>170 mg/m³ (Rat) 6 hour(s)
4.04 g/kg (Rat)

- **Eye Irritation :**
Markedly irritating [Rabbit]

- **Skin Irritation :**
Draize – 2 [Rabbit]

- **Reproductive and Developmental Toxicity :**
Bisphenol A (BPA) has been examined in rats and mice for evidence of reproductive and developmental toxicity. Based on the results of these studies, BPA should not be considered a selective reproductive or developmental toxicant. In mice, some effects on offspring were observed, but they occurred at dose levels sufficiently high to produce maternal toxicity. Studies have shown that BPA possesses estrogenic activity in special experimental systems, however, it is not yet clear how relevant these studies are to human health.

12. ECOLOGICAL INFORMATION

This section will be updated as ecological reviews are completed.

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13. DISPOSAL CONSIDERATIONS

■ General Recommendations :

If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local regulations.

14. TRANSPORT INFORMATION

■ US Department of Transportation Classification :

This material is not subject to DOT regulations under 49 CFR Parts 171–180

■ International Air Transportation Association :

This material is not classified as hazardous under IATA regulations.

■ International Maritime Organization – IMDG :

This material is not classified as hazardous under IMDG regulations.

15. REGULATORY INFORMATION

The regulatory information provided is not intended to be comprehensive. Other federal, state and local regulations may apply to this material.

Federal Regulatory Status

■ Superfund Amendment & Reauthorization Act (SARA) Title III :

SARA Hazard Categories(311/312) :

Immediate (Acute) Health Hazard. Delayed (Chronic) Health Hazard.

SARA Toxic Release Inventory(TRI) (313) :

4,4-Isopropylidenediphenol (80-05-7) 100%weight

■ Toxic Substances Control Act (TSCA) Inventory Status :

This material is listed on the EPA TSCA Inventory of Chemical Substances.

State Regulatory Status

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

New Jersey Right-To-Know Chemical List :

4,4'-Isopropylidenediphenol (80-05-7) 100%weight

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Pennsylvania Right-To-Know Chemical List :

4,4'-Isopropylidenediphenol (80-05-7) 100%weight Spec Haz Sub/Env Haz

16. OTHER INFORMATION

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.